

ATTORNEY DOCKET NO.
00CXT0330D/13628.0267

PATENT
Customer ID No. 33649

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-17 (Cancelled).

18. (Previously presented) A system for receiving data comprising:
a programmable pattern matching engine receiving a pattern and a data stream and generating an index entry if the pattern is present in the data stream;
a programmable media access controller reading the index entry and determining whether to continue receipt of the data stream; and
a CRC engine performing CRC processing of a received data frame if the programmable media access controller determines to continue receipt of the data stream.

19. (Previously presented) The system of claim 18 further wherein the pattern comprises one or more of a MAC address, an IP address, and a protocol identifier (PID) of an MPEG frame.

20. (Previously presented) The system of claim 18 wherein the programmable pattern matching engine performs one or more of address filtering, logical link control (LLC) filtering, protocol identifier (P7D) filtering, and security ID (SID) filtering in a Multimedia Cable Network System (MCNS)

21. (Previously presented) The system of claim 18 further comprising a cable modem DMA controller coupled to the programmable media access controller, the programmable pattern matching engine, and the DES/CRC engine, the cable modem DMA controller facilitating movement of data between the programmable media access controller, the programmable pattern matching engine, and the DES/CRC engine.

Claim 22 (Cancelled).

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23. (Previously presented) The system of claim 18 wherein the CRC engine further comprises a DES/CRC engine performing DES decryption or CRC processing of a received data frame if the programmable media access controller determines to continue receipt of the data stream.

Claims 24-25 (Cancelled)

26. (Previously presented) A cable modem comprising:
a programmable media access controller;
a programmable pattern matching engine that is programmed by the media access controller; and
a programmable CRC engine that is programmed by the media access controller.

27. (Previously presented) The cable modem of claim 26 wherein the pattern matching engine matches address segments of data that is received at a first interface of the cable modem.

28. (Previously presented) The cable modem of claim 26 wherein the pattern matching engine determines whether to accept a frame at the cable modem quicker than if the cable modem were required to wait on processing at a central microprocessor.

29. (Previously presented) The cable modem of claim 27 wherein the pattern matching engine enables pattern matching of different length frame portions.

30. (Previously presented) The cable modem of claim 29 wherein the different length frame portions are selected from the group comprising bit length, byte length, word length, double word length, kilobyte length, and megabyte length.

31. (Previously presented) A method for receiving data comprising:

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determining two or more acceptable parameters for data frames that are to be received;

programming at least one of the acceptable parameters into a pattern matching engine;

programming at least one of the acceptable parameters into a DES/CRC engine;

receiving a data frame at the communication device;

parsing the data frame to obtain a predetermined portion of the data frame;

comparing the predetermined portion of the data frame with at least one of the acceptable parameters stored in the pattern matching engine; and

processing the data frame with the DES/CRC engine if the predetermined portion of the data frame matches at least one of the acceptable parameters.

32. (Previously presented) The method of claim 31 further comprising registering the result of the comparison in a suitable format for access by a microprocessor.

33. (Previously presented) The method of claim 32 further comprising reading the registered results with a microprocessor such that the microprocessor may determine whether to drop or accept the data frame that has been received at the communication device.

34. (Previously presented) The method of claim 32 wherein the predetermined portion of the data frame is an address portion of the data frame.

35. (Previously presented) The cable modem of claim 26 wherein patterns in the data comprise one or more of a MAC address, an IP address, and a protocol identifier (PIID) of an MPEG frame.

36. (Previously presented) The cable modem of claim 26 wherein a operation of the cable modem comprise one or more of logical link control (LLC) filtering, protocol identifier (PID) filtering, and security ED (SID) filtering in a Multimedia Cable Network System (MCNS).

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37. (Previously presented) The cable modem system of claim 26 wherein the DES/CRC engine performs DES decryption or CRC processing of a received data frame after a microprocessor receives data from the pattern matching engine and determines to accept a received frame based on the data received from the pattern matching engine.